

PROJECT DESCRIPTION

THIS PROJECT INVOLVES RECONSTRUCTION OF THE EXISTING FULL-COLOR TRAFFIC SIGNAL AT THE INTERSECTION OF MD 436 (RIDGELY AVE) AT MELVIN AVE INCLUDING LED SIGNAL HEADS, LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, APS PUSHBUTTONS AND SIGNS. MD 436 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA FOUR-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN ALTERNATE PEDESTRIAN PHASE FOR THE NORTH LEG AND A CONCURRENT PEDESTRIAN PHASE FOR THE WEST LEG OF THE INTERSECTION.

CONTROLLER REQUIREMENTS

THE EXISTING TRAFFIC SIGNAL CONTROLLER HOUSED IN A POLE MOUNTED CABINET SHALL BE REMOVED. A NEW FULL-TRAFFIC-ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE FURNISHED BY SHA AND INSTALLED BY THE CONTRACTOR. A 2-WIRE APS CENTRAL CONTROL UNIT SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY SHA. IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY SHA.

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 436 (RIDGELY AVENUE):

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS RIDGELY AT MELVIN. WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS MELVIN AVENUE:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS MELVIN AT RIDGELY. WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

EQUIPMENT LIST "A, B & C"

A. EQUIPMENT TO BE SUPPLIED BY SHA:

ITEM NO.	DESCRIPTION
900000	SHEET ALUMINUM GROUND MOUNTED SIGN 10 - S1-1 FYG 36"x36"
900000	4 - S4-4(2) FYG 30"x12" 6 - M6-2(1) FYG 30"x24"
	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN 4 - D-3(1) (DUAL FACE) 60"x16"
	1 - R7-1(1) 12"x18" 4 - M1-5(4) 78"x36"
900000	2 - S1-1 FYG 36"x36" 4 - R10-3(1) 9"x15"
	2 - M6-2(1) FYG 30"x24"
	CONTROLLER CABINET, SIZE "5" W/CTRL, VIDEO INT. 1-8 CAM

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION
100000	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	CLASS 2 EXCAVATION
203030	TEST PIT EXCAVATION
585621	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	TYPE A CURB ANY HEIGHT OR DEPTH
655105	5 INCH CONCRETE SIDEWALK
655120	DETECTABLE WARNING SURFACE FOR CURB RAMPS
704345	PLACING FURNISHED TOPSOIL 4 INCH DEPTH
708220	TURFGRASS SOD ESTABLISHMENT
800000	2-WIRE APS CENTRAL CONTROL UNIT
800000	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH LED ROADWAY LUMINAIRE
800000	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	16 INCH LED COUNTRYSIDE PEDESTRIAN SIGNAL HEAD
800000	IP-BASED VIDEO DETECTION CAMERA & ANY LENGTH LEAD-IN CABLE
800000	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	MAST ARM POLE & 38' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	MAST ARM POLE & 50' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	TWIN MAST ARM POLE & 50'/50' MAST ARMS ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	100 AMP EMBEDDED METERED SERVICE PEDESTAL, CONCRETE COLLAR & GROUND RODS
800000	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE) INCLUDING F&I FOUNDATION & GROUND ROD
800000	UP TO 4 INCH CABLE 3 CONDUCTOR (NO. 12 AWG) (B&W) TYPE TCC
800000	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT -- BORED OR SLOTTED
800000	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
800000	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810022	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
811001	FURNISH AND INSTALL ELECTRICAL HANDWIRE
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860292	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
861105	ELECTRICAL CABLE -- 2 CONDUCTOR (NO. 14 AWG)
861107	ELECTRICAL CABLE -- 5 CONDUCTOR (NO. 14 AWG)
861108	ELECTRICAL CABLE -- 7 CONDUCTOR (NO. 14 AWG)

C. THE EXISTING TRAFFIC SIGNAL CONTROLLER SHALL BE RETURNED TO SHA. ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASING CHART

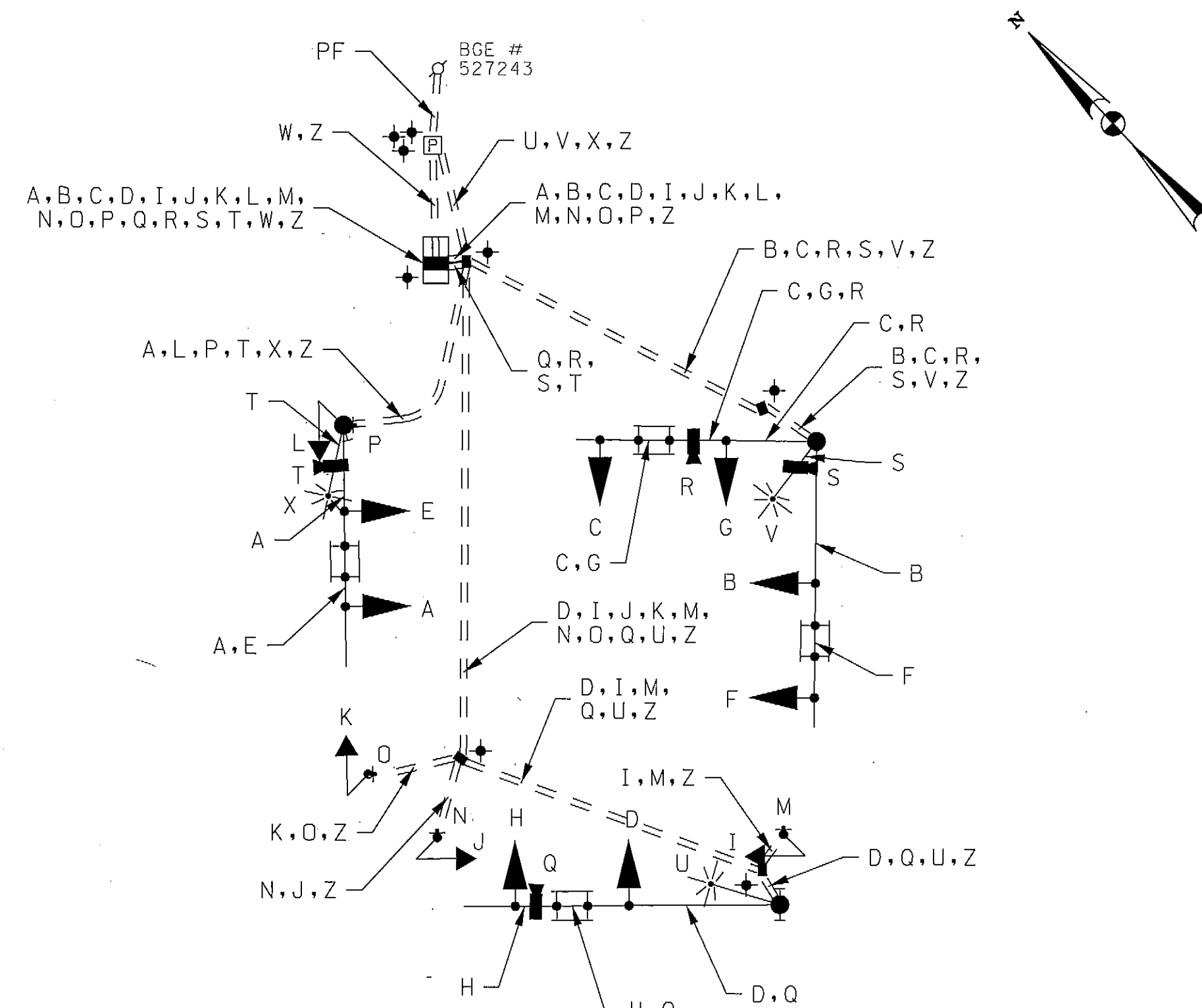
	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 2 AND 6	G	G	G	G	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE	G	G	G	G	R	R	R	R	FL/DW	FL/DW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 4 AND 8	R	R	R	R	G	G	G	G	DW	DW	DW	DW
4 AND 8 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 AND 8 ALT	R	R	R	R	G	G	G	G	DW	DW	WK	WK
PED CLEARANCE	R	R	R	R	G	G	G	G	DW	DW	FL/DW	FL/DW
4 AND 8 ALT CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
3. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
4. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS. TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02 AND MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
5. UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
6. ALL PEDESTAL FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE.
7. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MD MUTCD CHAPTER 4E "PEDESTRIAN CONTROL FEATURES" AND FIGURES 4E-3 AND 4E-4, AND THE LATEST NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
8. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
9. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
10. PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
11. PROPOSED LUMINAIRES SHALL BE SUPPLIED WITH A PHOTOCCELL.
12. VIDEO DETECTION CAMERA ALIGNMENT SHALL BE COORDINATED WITH THE ENGINEER.
13. DURING CONSTRUCTION, PROPOSED SIGNAL EQUIPMENT SHALL NOT BLOCK EXISTING SIGNAL EQUIPMENT.
14. THE CONTRACTOR SHALL CAP AND ABANDON CONDUITS FEEDING EXISTING SIGNAL EQUIPMENT THAT IS REMOVED.
15. THE CONTRACTOR SHALL CONTACT ED RODENHIZER AT THE SIGNAL SHOP (410-787-7652) TO DELIVER APS EQUIPMENT FOR TESTING.

WIRING KEY

A,B,C,D	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
E,F,G,H, I,J,K,L	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
M,N,O,P	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Q,R,S,T	IP-BASED VIDEO DETECTION CAMERA CABLE
U,V,X	3-CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) (B,W,G), TYPE TC
W	1-CONDUCTOR ELECTRICAL CABLE (NO. 8 AWG- THHN/THWN), 3 RUNS
Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
PF	PROPOSED UNDERGROUND POWER FEED BY BGE
✦	PROPOSED GROUND ROD



CONTACT PERSONS FOR DISTRICT #5 ARE AS FOLLOWS:

MS. KIMBERLY TRAN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: 410-841-1019

MR. JOE GECKLE
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
410-841-1013

MR. JAMES FOLDEN
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
410-841-1031

CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

MS. CORREN JOHNSON
DIVISION CHIEF,
TRAFFIC OPERATIONS
PHONE: 410-787-7630

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF
TRAFFIC OPERATIONS
410-787-7631

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
CHIEF, SIGN OPERATIONS
410-787-7676



REVISIONS		GENERAL INFORMATION SHEET			
		SCALE <u>NONE</u> DATE <u>APRIL 2013</u> CONTRACT NO. <u>XY1515185</u>			
		DESIGNED BY <u>WFV</u>		COUNTY <u>ANNE ARUNDEL</u>	
		DRAWN BY <u>WFV</u>		LOGMILE <u>02043600.20</u>	
		CHECKED BY <u>BJG</u>		TIMS NO. <u>L826</u>	
		FAP NO. _____		TOD NO. _____	
TS NO. 10067A-G1		DRAWING SP-2 OF 2		SHEET NO. OF	

PLOTTED: Wednesday, April 03, 2013 AT 09:25 AM
FILE: \\balsrv03\y2008\2008\09148_tcdes\Task 123_MD 436 at Melvin\CADD\pSG-0002_MD436@Melvin-GL.dgn